



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

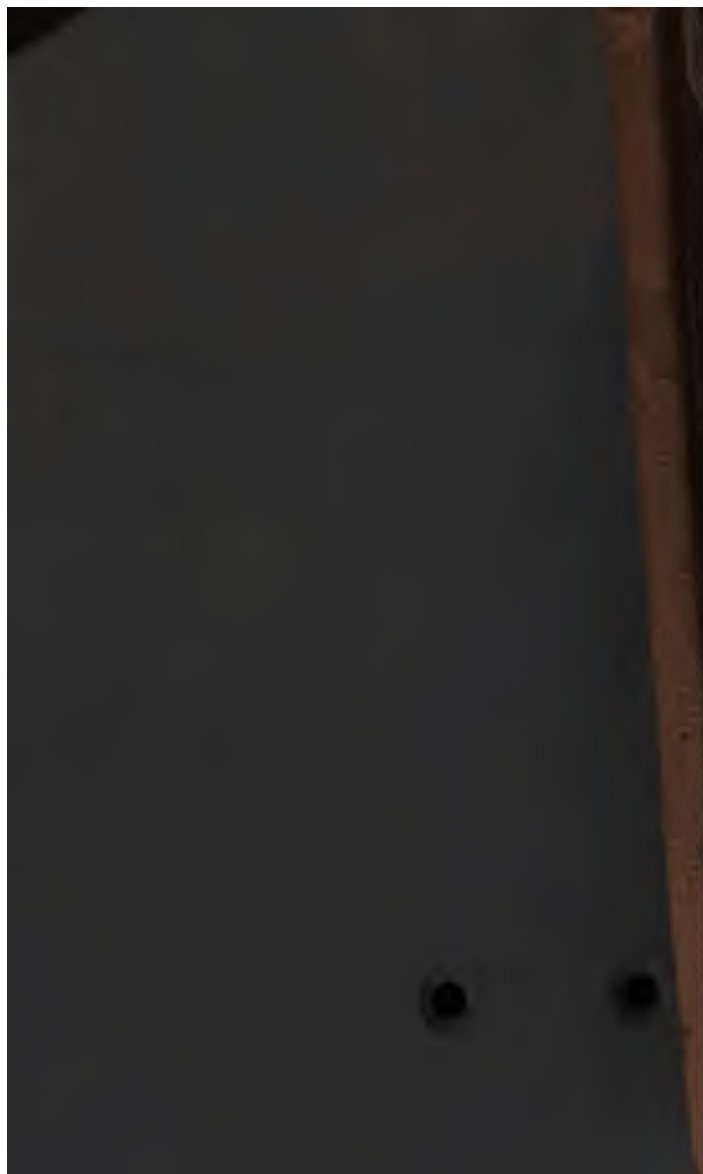
Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>



ATLANTIC SERVICE,

OF THE ATLANTIC COAST LINE STEAMSHIP COMPANY.

AND PASSENGER SERVICE.

—1897—

Having received the Honorable Secretary of the Navy's approval of the service of the Atlantic Coast Line Steamship Company, the Company is enabled to offer the following service:

Between New York and London, Liverpool, and other ports of the British Isles, the Company's service is as follows:

THURSDAY	Direct to London & Liverpool.
FRIDAY	Direct to Liverpool & London.
SATURDAY	Direct to London & Liverpool.
SUNDAY	Direct to London & Liverpool.

Between New York and other ports of the British Isles, the Company's service is as follows:

Between New York and other ports of the British Isles, the Company's service is as follows:

Between New York and other ports of the British Isles, the Company's service is as follows:

Between New York and other ports of the British Isles, the Company's service is as follows:

Between New York and other ports of the British Isles, the Company's service is as follows:

Between New York and other ports of the British Isles, the Company's service is as follows:

Between New York and other ports of the British Isles, the Company's service is as follows:

Between New York and other ports of the British Isles, the Company's service is as follows:







GREENLEAF'S
NEW
PRIMARY
ARITHMETIC



BOSTON.
ROBERT S. DAVIS & CO.

2 T 118.62.430

**HARVARD COLLEGE
LIBRARY**



**THE ESSEX INSTITUTE
TEXT-BOOK COLLECTION**

• • •

**GIFT OF
GEORGE ARTHUR PLIMPTON
OF NEW YORK**

JANUARY 25, 1924



3 2044 096 996 277



GREENLEAF'S NEW PRIMARY ARITHMETIC.

A
MENTAL ARITHMETIC,

UPON THE

INDUCTIVE PLAN;

WITH

EASY EXERCISES FOR THE SLATE.

DESIGNED FOR PRIMARY SCHOOLS.

By **BENJAMIN GREENLEAF, A. M.,**

AUTHOR OF "COMMON SCHOOL ARITHMETIC," ETC.

BOSTON:
PUBLISHED BY **ROBERT S. DAVIS & CO.**

NEW YORK: D. APPLETON & CO., AND PHINNEY, BLAKEMAN, & MASON.

PHILADELPHIA: J. B. LIPPINCOTT AND COMPANY.

COLUMBUS, OHIO: RILEY AND BOWLES.

1862.

✓
GREENLEAF'S MATHEMATICAL SERIES.

1. **NEW PRIMARY ARITHMETIC**, upon the Inductive Plan; with easy Exercises for the Slate, for Primary Schools. Improved edition. 84 pp.

2. **INTELLECTUAL ARITHMETIC**; being an advanced Intellectual Course; for Common Schools and Academies. Improved edition. 156 pp.

3. **COMMON SCHOOL ARITHMETIC; OR, INTRODUCTION TO THE NATIONAL ARITHMETIC**. Improved electrotype edition. 324 pp.

4. **NATIONAL ARITHMETIC**, for High Schools, Academies, and Normal Schools. New electrotype edition, with additions and improvements. 444 pp.

5. **PRACTICAL TREATISE ON ALGEBRA**, for Academies and High Schools, and for advanced Students in Common Schools. Improved stereotype edition. 360 pp.

6. **ELEMENTS OF GEOMETRY AND TRIGONOMETRY**, with Practical Applications. Designed for High Schools, Academies, and Colleges. Improved electrotype edition. With the Tables, complete. 490 pp.

COMPLETE KEYS TO INTELLECTUAL, COMMON SCHOOL, AND NATIONAL ARITHMETICS, ALGEBRA, AND GEOMETRY AND TRIGONOMETRY, containing Solutions and Explanations, *for Teachers only*.

Entered according to Act of Congress, in the year 1857, by
BENJAMIN GREENLEAF,
in the Clerk's Office of the District Court for the District of Massachusetts.

Entered according to Act of Congress, in the year 1861, by
BENJAMIN GREENLEAF,
in the Clerk's Office of the District Court of the District of Massachusetts.

HARVARD COLLEGE LIBRARY

GIFT OF

GEORGE ARTHUR PLIMPTON

JANUARY 25, 1924

Cambridge: Electrotyped and Printed by Welch, Bigelow, & Co.

P R E F A C E .

THE object of this primary book is to teach the pupil how to *think*, and to enable him, by an almost imperceptible gradation of thought, to advance from the simplest forms of reasoning to the more vigorous exercises of the mind.

Hence, no arbitrary *rules* have been introduced, and only such hints and suggestions, with occasional formulæ of reasoning, as were considered absolutely necessary for the profitable study of the lessons.

In order that the reasoning of some of the principal processes might be the more apparent to the beginner, pictures of objects have been, to some extent, introduced. After these, counters are employed, as unit marks ; and then follow lessons without any such aids, that the learner may early acquire the habit of depending upon mental resources alone for the solution of problems.

The numerous pictorial illustrations of the present edition have been designed and engraved, by skilful artists, especially for this work.

Several pages of *written* arithmetic have been introduced, at the close of the work, which can be used while the pupil is advancing in the *mental* department, or omitted until that is finished.

BRADFORD, MASS., July, 1861.

SUGGESTIONS TO TEACHERS.

THE lessons assigned to the learner should never be longer than will admit of being thoroughly prepared for recitation.

The better to secure the attention of each member of the class, and elicit earnestness of thought, the questions should be read to the whole class, and each pupil taught to be in readiness, in whatever order called upon, to give promptly the solution required.

The solutions should be uniformly according to such forms as are deemed by the teacher the neatest and best. The greatest care should be observed to have them always expressed in language entirely accurate, and pronounced in a clear and distinct manner.

Frequent reviews, especially of the tables, will alone give thoroughness. In general, with a lesson in advance, it will be advantageous to assign some portion previously gone over, as a review.

The exercises for the slate may, if thought best, be performed in connection with those that are purely mental; but the slate should not be allowed to be used in the performance of the latter.

Every term, or process, connected with any of the lessons, which the beginner may be likely not readily to understand, the intelligent teacher will not need to be reminded, should be clearly explained to the pupil, before assigning the lesson.

MENTAL ARITHMETIC.



LESSON I.

1. If you wish to know how many fingers you have, what must you do?

ANSWER. *I must count them.*

2. What, then, is counting?

ANS. *Finding the number of things.*

3. In counting, what is a single thing called?

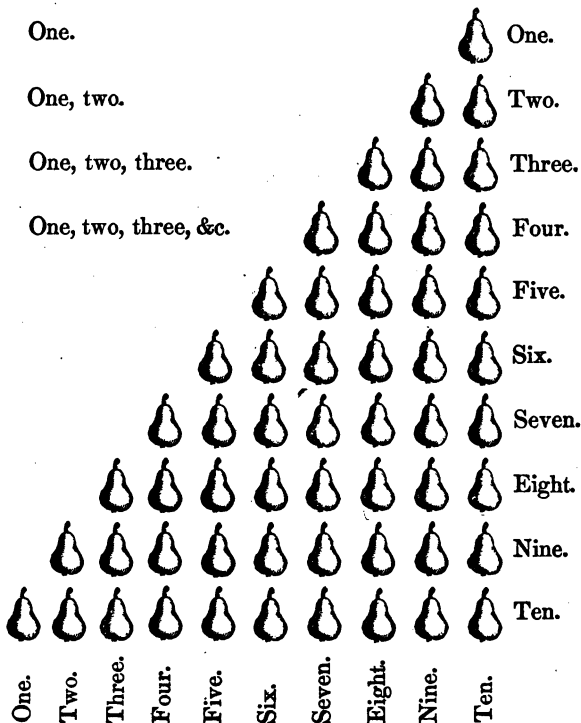
ANS. *A unit, or one.*

4. What, then, is a number?

ANS. *A unit, or a collection of units.*

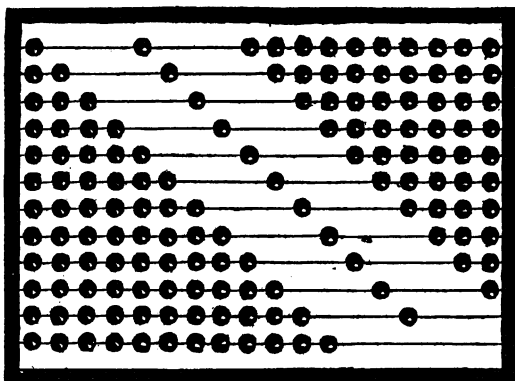
LESSON II.

Count the pears in each row, and tell the number.



NOTE TO THE TEACHER.—Other exercises should be provided, in addition to those on this and the next two pages, by means of counters or the numeral-frame, till the pupil can readily count twenty.

LESSON III.



Answer the following questions by counting the balls in the picture of the Numeral Frame : —

1. How many balls are one ball and one ball?
2. How many balls are two balls and one ball?
3. How many balls are three balls and one ball?
4. How many balls are four balls and one ball?
5. How many balls are five balls and one ball?
6. How many balls are six balls and one ball?
7. How many balls are seven balls and one ball?
8. How many balls are eight balls and one ball?
9. How many balls are nine balls and one ball?
10. Count from one to five. From two to six.
11. Count from one to seven. From three to seven.
12. Count from seven to ten. From one to ten.

LESSON IV.



1. Here is a picture of some chickens. Count them and tell how many there are.

2. What do one, two, three, &c. express?

ANS. *Numbers.*

3. How, then, can you express numbers?

ANS. *By words.*

4. Name another method of expressing them.

ANS. *By figures.*

5. How many figures are used to express numbers?

ANS. *Ten.*

6. Name these figures.

ANS. 1, 2, 3, 4, 5, 6, 7, 8, 9, 0.

One, two, three, four, five, six, seven, eight, nine, cipher.

7. What is the cipher sometimes called?

ANS. *Zero, or nought.*

8. Why is it so called?

ANS. *Because it stands for nothing.*

9. Write the figures as follows on your slate:

1, 2, 3, 4, 5, 6, 7, 8, 9, 0.

10. How can you express ten by figures?

ANS. *By writing the figure 1 with 0 on the right of it; thus, 10.*

11. What, then, does the figure 1 with 0 at its right stand for?

ANS. *One ten, or ten.*

12. Write the figures standing for ten.

LESSON V.



1. Here is a picture of some bees ; count the number in each row.

2. How many bees are there in both rows ?

3. If there are ten in each row and twenty in both rows, how many, then, are two tens ?

4. How can you express twenty by figures ?

ANS. *By writing the figure 2 with 0 on the right of it ; thus, 20.*

5. Read the figures in the following table, and write them on the slate.

Number.	Printed Figures.	Written Figures.	Number.	Printed Figures.	Written Figures.
One,	1	1	Eleven,	11	11
Two,	2	2	Twelve,	12	12
Three,	3	3	Thirteen,	13	13
Four,	4	4	Fourteen,	14	14
Five,	5	5	Fifteen,	15	15
Six,	6	6	Sixteen,	16	16
Seven,	7	7	Seventeen,	17	17
Eight,	8	8	Eighteen,	18	18
Nine,	9	9	Nineteen,	19	19
Ten,	10	10	Twenty,	20	20

LESSON VI.



1. 1 horse and 1 horse are how many horses?
How many are 1 and 1?



2. 1 vessel and 2 vessels are how many vessels?
How many are 1 and 2?



3. A cat caught 1 mouse in the cellar and 3 mice in the pantry. How many mice did she catch in all?



4. Jane put 1 cup on the table, and her sister put on 4 more. How many cups did they both put on the table?

How many are 1 and 4?



5. John set out 1 tree, and James set out 5. How many did they both set out?

How many are 1 and 5?



6. Henry has 1 acorn, and Edward has 6. How many acorns have they both?

How many are 1 and 6?



7. 1 squirrel and 7 squirrels are how many squirrels?

How many are 1 and 7?



8. Ellen and 8 other girls are at play. How many girls are at play?

How many are 1 and 8?



9. 1 snow-bird and 9 yellow-birds are sitting on a branch. How many birds are there in all?

Repeat the table :

1 and 1 are 2.

1 and 2 are 3.

1 and 3 are 4.

1 and 4 are 5.

1 and 5 are 6.

1 and 6 are 7.

1 and 7 are 8.

1 and 8 are 9.

1 and 9 are 10.

1 and 10 are 11.

LESSON VII.



1. George had 2 clusters of grapes, and his father gave him another. How many clusters had he then?

How many are 2 and 1?



2. In one yard there are 2 pigs, and in another there are 2. How many pigs are in both yards?

How many are 2 and 2?



3. 2 baskets and 3 baskets are how many?

How many are 2 and 3?



4. A merchant sold 2 pitchers at one time, and 4 pitchers at another time. How many did he sell in all?

How many are 2 and 4?



5. 2 apples and 5 apples are how many?

How many are 2 and 5?



6. Edwin has 2 tops, and George has 6.
How many have they both?

How many are 2 and 6?



7. 2 flowers and 7 flowers are how many
flowers?

How many are 2 and 7?



8. 2 parasols and 8 parasols are how many?

How many are 2 and 8?



9. 2 soldiers and 9 soldiers are how many?

How many are 2 and 9?

Repeat the table:

2 and 1 are 3.

2 and 6 are 8.

2 and 2 are 4.

2 and 7 are 9.

2 and 3 are 5.

2 and 8 are 10.

2 and 4 are 6.

2 and 9 are 11.

2 and 5 are 7.

2 and 10 are 12.

LESSON VIII.



1. Arthur had 3 lambs, and his brother gave him 1 more. How many lambs had he then?

How many are 3 and 1?



2. 3 sloops began to sail on the lake, and soon after 3 more. How many were then sailing?

How many are 3 and 3?



3. 3 tumblers and 5 tumblers are how many tumblers?

How many are 3 and 5?



4. 3 bees and 7 bees are how many bees?

How many are 3 and 7?

Repeat the table:

3 and 1 are 4.

3 and 6 are 9.

3 and 2 are 5.

3 and 7 are 10.

3 and 3 are 6.

3 and 8 are 11.

3 and 4 are 7.

3 and 9 are 12.

3 and 5 are 8.

3 and 10 are 13.

LESSON IX.



1. 4 rabbits are in one place, and 2 in another. How many in all?

How many are 4 and 2?



2. Frank has 4 pears, and Charles has 4 more. How many pears have both?

How many are 4 and 4?



3. 4 locks and 5 locks are how many locks?

How many are 4 and 5?



4. Henry has 4 flags, and Charles has 6. How many flags have both?

How many are 4 and 6?

Repeat the table:

4 and 1 are 5.	4 and 6 are 10.
4 and 2 are 6.	4 and 7 are 11.
4 and 3 are 7.	4 and 8 are 12.
4 and 4 are 8.	4 and 9 are 13.
4 and 5 are 9.	4 and 10 are 14.

LESSON X.



1. James has caught 5 trout and 1 perch.
How many fishes has he caught in all?



2. 5 balls and 2 balls are how many balls?



3. Thomas recited 5 perfect lessons, and his brother 4. How many did both recite?



4. 5 peaches and 6 peaches are how many?

Repeat the table :

5 and 1 are 6.

5 and 6 are 11.

5 and 2 are 7.

5 and 7 are 12.

5 and 3 are 8.

5 and 8 are 13.

5 and 4 are 9.

5 and 9 are 14.

5 and 5 are 10.

5 and 10 are 15.

LESSON XI.



1. 6 girls and 2 girls are how many girls?



2. John caught 6 fishes, and Daniel caught 5 fishes. How many fishes did both catch?

Repeat the table:

6 and 1 are 7.	6 and 6 are 12.
6 and 2 are 8.	6 and 7 are 13.
6 and 3 are 9.	6 and 8 are 14.
6 and 4 are 10.	6 and 9 are 15.
6 and 5 are 11.	6 and 10 are 16.

LESSON XII.



1. 7 dollars and 2 dollars are how many dollars?



2. If you had 7 chestnuts, and I should give you 4 more, how many would you then have?

Repeat the table:

7 and 1 are 8.	7 and 6 are 13.
7 and 2 are 9.	7 and 7 are 14.
7 and 3 are 10.	7 and 8 are 15.
7 and 4 are 11.	7 and 9 are 16.
7 and 5 are 12.	7 and 10 are 17.

LESSON XIII.

Repeat the table :

8 and 1 are 9.	8 and 6 are 14.
8 and 2 are 10.	8 and 7 are 15.
8 and 3 are 11.	8 and 8 are 16.
8 and 4 are 12.	8 and 9 are 17.
8 and 5 are 13.	8 and 10 are 18.



1. Albert paid 8 dollars for a globe, and 3 dollars for taking lessons on it. How much did he pay in all?

How many are 8 and 3?

2. Paid 8 dollars for a table, and 9 dollars for some chairs. How many dollars did both cost?

How many are 8 and 9?

LESSON XIV.

Repeat the table :

9 and 1 are 10.	9 and 6 are 15.
9 and 2 are 11.	9 and 7 are 16.
9 and 3 are 12.	9 and 8 are 17.
9 and 4 are 13.	9 and 9 are 18.
9 and 5 are 14.	9 and 10 are 19.



1. Rufus one day rode 9 miles, and the next day 7 miles. How many miles did he ride both days?

How many are 9 and 7?

2. Susan found under one tree 9 apples, and under another 10 apples. How many did she find under both trees?

How many are 9 and 10?

LESSON XV.

Repeat the table?

- | | |
|------------------|-------------------|
| 10 and 1 are 11. | 10 and 6 are 16. |
| 10 and 2 are 12. | 10 and 7 are 17. |
| 10 and 3 are 13. | 10 and 8 are 18. |
| 10 and 4 are 14. | 10 and 9 are 19. |
| 10 and 5 are 15. | 10 and 10 are 20. |



1. Alice saw 10 butterflies in the forenoon, and 6 in the afternoon. How many butterflies did she see in all?

How many are 10 and 6?

2. Edwin had 10 marbles, and bought 10 more. How many then had he?

How many are 10 and 10?

LESSON XVI.

- How many are 2 and 5? 3 and 5?
- How many are 4 and 7? 7 and 4?
- How many are 5 and 6? 6 and 5?
- How many are 8 and 2? 9 and 1?
- How many are 10 and 4? Why 14?

Ans. *Because 10 and 4 make 14.*



6. A car containing 7 persons took in 5 more. How many did the car then contain? Why?

7. How many peaches are 9 peaches and 8 peaches? Why?



LESSON XVII.

1. Here is a picture of a lively scene. See what a collection of birds, both on the ground and on the fence. Count and tell how many there are on the ground.

2. Count and tell how many there are on one of the rails.

3. Count and tell how many there are on the two rails.

4. Count and tell how many there are on the ground and one of the rails.

5. Count and tell how many there are on the ground and on both rails.

6. How can you express thirty by figures?

ANS. *By writing the figure 3 with 0 on the right of it; thus, 30.*

7. What then does the figure 3 with 0 on its right represent?

ANS. *Three tens, or thirty.*

8. Write the figures which represent thirty.
 9. How can you express thirty-two by figures?
 ANS. *By writing 3 with 2 on the right of it; thus, 32.*

10. What then does the figure 3 with 2 on its right represent?
 ANS. *Thirty and two, or thirty-two.*

11. Write the figures which represent thirty-two.

12. How can you express forty by figures?
 ANS. *By writing 4 with 0 on the right of it; thus, 40.*

13. What, then, does the figure 4 with 0 on its right represent?

ANS. *Four tens, or forty.*

14. Write the figures which represent forty.

Number.	Printed Figures.	Written Figures.	Number.	Printed Figures.	Written Figures.
Twenty-one,	21	21	Thirty-one,	31	31
Twenty-two,	22	22	Thirty-two,	32	32
Twenty-three,	23	23	Thirty-three,	33	33
Twenty-four,	24	24	Thirty-four,	34	34
Twenty-five,	25	25	Thirty-five,	35	35
Twenty-six,	26	26	Thirty-six,	36	36
Twenty-seven,	27	27	Thirty-seven,	37	37
Twenty-eight,	28	28	Thirty-eight,	38	38
Twenty-nine,	29	29	Thirty-nine,	39	39
Thirty,	30	30	Forty,	40	40

15. Read the figures in the table, and write them upon the slate.

LESSON XVIII.



1. 2 ducks were standing near a pool ; but 1 of them has gone into it. How many remain out of the pool ?

1 from 2 leaves how many ?



2. Farmer Jones had 3 wheelbarrows, but has sold 1. How many has he left ?

1 from 3 leaves how many ?



3. Mary had 4 walnuts, but has given her sister 1. How many has she left ?

1 from 4 leaves how many ?



4. There are 5 pitchers upon a table ; 1 of them contains lemonade, and the others water. How many contain water ?

1 from 5 leaves how many ?



5. There are 6 flowers ; 1 of them is a tulip, and the others are pinks. How many are pinks ?



6. A merchant had 7 chests of tea, but has sold 1 chest. How many chests has he left?

1 from 7 leaves how many?



7. Lucy had 8 flowers, but has given 1 of them to her sister. How many has Lucy left?

1 from 8 leaves how many?



8. 9 flags were standing in a row, but 1 has been taken away. How many flags remain?

1 from 9 leaves how many?



9. John has 10 chickens. If he should sell 1 of them, how many would he have left?

1 from 10 leaves how many?

Repeat the table:

1 from 1 leaves 0.

1 from 6 leaves 5.

1 from 2 leaves 1.

1 from 7 leaves 6.

1 from 3 leaves 2.

1 from 8 leaves 7.

1 from 4 leaves 3.

1 from 9 leaves 8.

1 from 5 leaves 4.

1 from 10 leaves 9.

LESSON XIX.



1. George found 3 eggs in a nest, and took away 2 of them. How many did he leave?



2. 2 cents from 6 cents leaves how many?



3. 2 from 8 leaves how many?

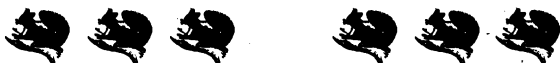


4. 2 from 9 leaves how many?

Repeat the table:

2 from 2 leaves 0.	2 from 7 leaves 5
2 from 3 leaves 1.	2 from 8 leaves 6
2 from 4 leaves 2.	2 from 9 leaves 7
2 from 5 leaves 3.	2 from 10 leaves 8
2 from 6 leaves 4.	2 from 11 leaves 9

LESSON XX.



1. There were in a cage 6 squirrels, but 3 of them have escaped. How many remain?



2. 8 ships were at sea, and 3 of them were lost in a storm. How many were left?

Repeat the table:

3 from 3 leaves 0.	3 from 8 leaves 5.
3 from 4 leaves 1.	3 from 9 leaves 6.
3 from 5 leaves 2.	3 from 10 leaves 7.
3 from 6 leaves 3.	3 from 11 leaves 8.
3 from 7 leaves 4.	3 from 12 leaves 9.

LESSON XXI.



1. 4 sheep from 7 sheep leaves how many sheep?



2. James had 10 chickens, but a fox carried off 4 of them. How many then remained?

Repeat the table:

4 from 4 leaves 0.	4 from 9 leaves 5.
4 from 5 leaves 1.	4 from 10 leaves 6.
4 from 6 leaves 2.	4 from 11 leaves 7.
4 from 7 leaves 3.	4 from 12 leaves 8.
4 from 8 leaves 4.	4 from 13 leaves 9.

LESSON XXII.



1. A boy had 6 rabbits, and lost 5 of them.
How many had he left?



2. Laura had 9 sheets of paper, but has used 5 of them in writing letters. How many sheets has she left?

Repeat the table :

5 from 5 leaves 0.

5 from 10 leaves 5.

5 from 6 leaves 1.

5 from 11 leaves 6.

5 from 7 leaves 2.

5 from 12 leaves 7.

5 from 8 leaves 3.

5 from 13 leaves 8.

5 from 9 leaves 4.

5 from 14 leaves 9.

LESSON XXIII.



1. 6 cents from 7 cents leaves how many cents?

6 from 7 leaves how many?



2. 10 pears grew upon a tree, but 6 have fallen off. How many remain on the tree.

Repeat the table :

6 from 6 leaves 0.

6 from 11 leaves 5.

6 from 7 leaves 1.

6 from 12 leaves 6.

6 from 8 leaves 2.

6 from 13 leaves 7.

6 from 9 leaves 3.

6 from 14 leaves 8.


6 from 10 leaves 4.

6 from 15 leaves 9.

LESSON XXIV.

Repeat the table :

7 from 7 leaves 0.	7 from 12 leaves 5.
7 from 8 leaves 1.	7 from 13 leaves 6.
7 from 9 leaves 2.	7 from 14 leaves 7.
7 from 10 leaves 3.	7 from 15 leaves 8.
7 from 11 leaves 4.	7 from 16 leaves 9.

 1. Emma bought a muff for 13 dollars, and sold it for 7 dollars. How much did she lose ?

7 from 13 leaves how many ?

2. Eliza planted 16 seeds, but only 7 came up. How many seeds failed to come up ?

7 from 16 leaves how many ?

LESSON XXV.

Repeat the table :

8 from 8 leaves 0.	8 from 13 leaves 6.
8 from 9 leaves 1.	8 from 14 leaves 6.
8 from 10 leaves 2.	8 from 15 leaves 7.
8 from 11 leaves 3.	8 from 16 leaves 8.
8 from 12 leaves 4.	8 from 17 leaves 9.



1. William earned 8 dollars, but paid them all away for a dog. How many dollars had he then left ?

8 from 8 leaves how many ?

2. Robert caught 11 squirrels, but 8 of them ran away. How many remained ?

LESSON XXVI.

Repeat the table :

9 from 9 leaves 0.	9 from 14 leaves 5.
9 from 10 leaves 1.	9 from 15 leaves 6.
9 from 11 leaves 2.	9 from 16 leaves 7.
9 from 12 leaves 3.	9 from 17 leaves 8.
9 from 13 leaves 4.	9 from 18 leaves 9.



1. Julia rode at one time 15 miles, and at another time 9 miles. How many more miles did she ride at the one time than at the other?

9 from 15 leaves how many?

2. From a chest of tea that contained 18 pounds there have been sold 9 pounds. How many pounds remain unsold?

LESSON XXVII.

Repeat the table :

10 from 10 leaves 0.	10 from 15 leaves 5.
10 from 11 leaves 1.	10 from 16 leaves 6.
10 from 12 leaves 2.	10 from 17 leaves 7.
10 from 13 leaves 3.	10 from 18 leaves 8.
10 from 14 leaves 4.	10 from 19 leaves 9.



1. A man sold bird cages, that cost him 15 dollars, for 10 dollars. How many dollars did he lose?

10 from 15 leaves how many?

2. A farmer has 17 sheep and 10 lambs. How many more sheep has he than lambs?

LESSON XXVIII.



1. Edmund bought a silver watch for 16 dollars, and sold it for 10 dollars. For how many dollars less than the cost did he sell it?

16 less 10 are how many?

2. Willie put 9 strawberries in a cup, and afterwards ate 7 of them. How many were then left?

3. How many are 8 less 1? 10 less 3?

4. How many are 6 less 2? 12 less 4?

5. How many are 11 less 5? 14 less 8?

6. How many are 19 less 10? 10 less 9?

7. How many are 17 less 10? 13 less 7?

8. How many are 16 less 8? 15 less 6?

LESSON XXIX.



1. From a brood of 16 chickens 9 have been carried away by a hawk. How many remain? Why 7?

ANS. *Because 9 taken from 16 leaves 7. 9 and 7 are 16.*

2. Lucy had 11 books, but has given 10 of them away. How many has she left? Why?

3. A lady had in her purse 13 dollars, but has spent 7 of them. How many dollars has she left? Why?

LESSON XXX.

1. Count from one to forty.



2. Count from forty to fifty.



3. Count from fifty to sixty.



4. Count from sixty to seventy.

Number.	Printed Figures.	Written Figures.	Number.	Printed Figures.	Written Figures.
Forty-one,	41	<i>41</i>	Fifty-six,	56	<i>56</i>
Forty-two,	42	<i>42</i>	Fifty-seven,	57	<i>57</i>
Forty-three,	43	<i>43</i>	Fifty-eight,	58	<i>58</i>
Forty-four,	44	<i>44</i>	Fifty-nine,	59	<i>59</i>
Forty-five,	45	<i>45</i>	Sixty,	60	<i>60</i>
Forty-six,	46	<i>46</i>	Sixty-one,	61	<i>61</i>
Forty-seven,	47	<i>47</i>	Sixty-two,	62	<i>62</i>
Forty-eight,	48	<i>48</i>	Sixty-three,	63	<i>63</i>
Forty-nine,	49	<i>49</i>	Sixty-four,	64	<i>64</i>
Fifty,	50	<i>50</i>	Sixty-five,	65	<i>65</i>
Fifty-one,	51	<i>51</i>	Sixty-six,	66	<i>66</i>
Fifty-two,	52	<i>52</i>	Sixty-seven,	67	<i>67</i>
Fifty-three,	53	<i>53</i>	Sixty-eight,	68	<i>68</i>
Fifty-four,	54	<i>54</i>	Sixty-nine,	69	<i>69</i>
Fifty-five,	55	<i>55</i>	Seventy,	70	<i>70</i>

LESSON XXXI.

1. Count from one to seventy.



2. Count from seventy to eighty.



3. Count from eighty to ninety.



4. Count from ninety to one hundred.

Number.	Printed Figures.	Written Figures.	Number.	Printed Figures.	Written Figures.
Seventy-one,	71	71	Eighty-six,	86	86
Seventy-two,	72	72	Eighty-seven,	87	87
Seventy-three,	73	73	Eighty-eight,	88	88
Seventy-four,	74	74	Eighty-nine,	89	89
Seventy-five,	75	75	Ninety,	90	90
Seventy-six,	76	76	Ninety-one,	91	91
Seventy-seven,	77	77	Ninety-two,	92	92
Seventy-eight,	78	78	Ninety-three,	93	93
Seventy-nine,	79	79	Ninety-four,	94	94
Eighty,	80	80	Ninety-five,	95	95
Eighty-one,	81	81	Ninety-six,	96	96
Eighty-two,	82	82	Ninety-seven,	97	97
Eighty-three,	83	83	Ninety-eight,	98	98
Eighty-four,	84	84	Ninety-nine,	99	99
Eighty-five,	85	85	One Hundred,	100	100

LESSON XXXII.



1. If John should see 1 vessel every time he should go down to the sea-side, how many would he see on going down to the sea-side twice ?



2. If a cabinet-maker can finish 1 table in a day, how many tables can he finish in 3 days ?



3. 5 times 1 tree are how many trees ?



4. 1 turkey was taken from a poultry-yard every night for 6 nights. How many were taken in all ?

Repeat the table :

Once 1 is 1.	6 times 1 are 6.
2 times 1 are 2.	7 times 1 are 7.
3 times 1 are 3.	8 times 1 are 8.
4 times 1 are 4.	9 times 1 are 9.
5 times 1 are 5.	10 times 1 are 10.

LESSON XXXIII.



1. If one butterfly has 2 wings, how many wings have 2 butterflies?

2 times 2 are how many?



2. 3 pairs of skates are how many skates?

3 times 2 are how many?



3. A boy has 2 hands. How many hands have 4 boys?

4 times 2 are how many?



4. A merchant sold 2 umbrellas every day for 7 days. How many umbrellas did he sell?

7 times 2 are how many?

Repeat the table:

Once 2 is 2.	6 times 2 are 12.
2 times 2 are 4.	7 times 2 are 14.
3 times 2 are 6.	8 times 2 are 16.
4 times 2 are 8.	9 times 2 are 18.
5 times 2 are 10.	10 times 2 are 20.

LESSON XXXIV.



1. How many cherries in 2 clusters of 3 cherries each?



2. If 3 quarts of berries can be gathered in one hour, how many quarts can be gathered in 5 hours?

Repeat the table:

Once 3 is 3.	6 times 3 are 18.
2 times 3 are 6.	7 times 3 are 21.
3 times 3 are 9.	8 times 3 are 24.
4 times 3 are 12.	9 times 3 are 27.
5 times 3 are 15.	10 times 3 are 30.

LESSON XXXV.



1. 1 wagon has 4 wheels. How many wheels have 4 wagons? 4 times 4 are how many?



2. At 4 cents each, what cost 6 pencils?

Repeat the table:

Once 4 is 4.	6 times 4 are 24.
2 times 4 are 8.	7 times 4 are 28.
3 times 4 are 12.	8 times 4 are 32.
4 times 4 are 16.	9 times 4 are 36.
5 times 4 are 20.	10 times 4 are 40.

LESSON XXXVI.

Repeat the table:

Once 5 is 5.	6 times 5 are 30.
2 times 5 are 10.	7 times 5 are 35.
3 times 5 are 15.	8 times 5 are 40.
4 times 5 are 20.	9 times 5 are 45.
5 times 5 are 25.	10 times 5 are 50.



1. When one vase costs 5 dollars, how many dollars must be paid for 3 vases?

3 times 5 are how many?

2. If a boat will sail 5 miles in one hour, how far will it sail in 6 hours?

6 times 5 are how many?

LESSON XXXVII.

Repeat the table:

Once 6 is 6.	6 times 6 are 36.
2 times 6 are 12.	7 times 6 are 42.
3 times 6 are 18.	8 times 6 are 48.
4 times 6 are 24.	9 times 6 are 54.
5 times 6 are 30.	10 times 6 are 60.



1. In a garden there are 6 rose-bushes, and on each bush there are 2 roses. How many roses are there in all?

2 times 6 are how many?

2. If one barrel of flour cost 6 dollars, how many dollars will 9 barrels cost?

9 times 6 are how many?

LESSON XXXVIII.

Repeat the table :

Once 7 is 7.	6 times 7 are 42.
2 times 7 are 14.	7 times 7 are 49.
3 times 7 are 21.	8 times 7 are 56.
4 times 7 are 28.	9 times 7 are 63.
5 times 7 are 35.	10 times 7 are 70.



1. When 7 cents are paid for one dove, how many cents must be paid for 5 doves ?
2. If one basket will contain 7 apples, how many apples will 8 baskets contain ?

8 times 7 are how many ?

LESSON XXXIX.

Repeat the table :

Once 8 is 8.	6 times 8 are 48.
2 times 8 are 16.	7 times 8 are 56.
3 times 8 are 24.	8 times 8 are 64.
4 times 8 are 32.	9 times 8 are 72.
5 times 8 are 40.	10 times 8 are 80.



1. What cost 6 telescopes, at 8 dollars each ?
- 6 times 8 are how many ?
2. If 8 men be required to row one boat, how many men will be required to row 8 boats ?
- 8 times 8 are how many ?

LESSON XL.

Repeat the table :

Once 9 is 9.	6 times 9 are 54.
2 times 9 are 18.	7 times 9 are 63.
3 times 9 are 27.	8 times 9 are 72.
4 times 9 are 36.	9 times 9 are 81.
5 times 9 are 45.	10 times 9 are 90.



1. When 9 cents are paid for one cluster of grapes, how many cents must be paid for 3 clusters ?

3 times 9 are how many ?

2. At 9 cents a pound, what will 10 pounds of sugar cost ?

LESSON XLI.

Repeat the table :

Once 10 is 10.	6 times 10 are 60.
2 times 10 are 20.	7 times 10 are 70.
3 times 10 are 30.	8 times 10 are 80.
4 times 10 are 40.	9 times 10 are 90.
5 times 10 are 50.	10 times 10 are 100.



1. If a house have 10 windows in front, how many windows in front will 4 houses of the same kind have ?

4 times 10 are how many ?

2. If a writing-book cost 10 cents, what will 9 writing-books cost ?

9 times 10 are how many ?

LESSON XLII.



1. Three dogs while hunting caught 4 rabbits each ; how many rabbits did they catch in all ?
3 times 4 are how many ?
2. What will 2 lemons cost, at 2 cents apiece ?
2 times 2 are how many ?
3. At 5 cents apiece, what will 7 oranges cost ?
5 times 7 are how many ?
4. Joseph went a fishing 6 times, and caught 3 fishes each time. How many fishes did he catch ?
3 times 6 are how many ?
5. What will 4 sheep cost, at 3 dollars each ?
4 times 3 are how many ?
6. What will 6 tops cost, at 7 cents apiece ?
6 times 7 are how many ?

LESSON XLIII.



1. If a cow give 6 quarts of milk a day, how many quarts of milk will she give in 8 days?
6 times 8 are how many?
2. Emily bought 10 combs, at 10 cents apiece. How much did she pay for them?
10 times 10 are how many?
3. What will 7 barrels of vinegar cost, at 6 dollars each?
6 times 7 are how many?
4. At 9 cents a pound, what will 4 pounds of sugar cost?
9 times 4 are how many?
5. 8-times 6 are how many? 4 times 9?

LESSON XLIV.



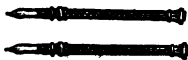
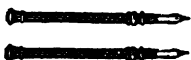
1. What cost 4 plows, at 10 dollars apiece? Why 40 dollars?
Ans. Since one plow cost 10 dollars, 4 plows will cost 4 times 10 dollars, or 40 dollars.
2. Oliver bought 6 melons, at 9 cents each. How much did he pay for all? Why?
3. 5 pear-trees have on each of them 8 pears. How many pears are on them all? Why?
4. Caroline has 8 classmates, and she gave to each 2 apples. How many apples did she give them? Why?
5. What is the cost of 7 hats, at 3 dollars apiece? Why?

LESSON XLV.



1. If one ball cost 9 cents, what will 5 balls cost? Why?
2. What is the cost of 4 pairs of boots, at 4 dollars a pair? Why?
3. If a man can make 6 pairs of shoes in a day, how many pairs can he make in 6 days? Why?
4. What cost 8 pounds of sugar, at 10 cents a pound? Why?
5. Bought 9 cords of wood, at 7 dollars a cord. What was the cost? Why?
6. What cost 5 pounds of cheese at 10 cents a pound? Why?
7. If James earns 8 dollars in one month, how many dollars will he earn in 10 months?

LESSON XLVI.



1. A father has given his 2 sons 4 gold pens.
How many pens are there to each of the sons?
2 in 4 how many times?



2. A farmer has 6 pigs, which he wishes to
put in pens that shall contain only 2 pigs each.
How many pens must he have?



3. If it takes 2 skates to make a pair, how
many pairs will 8 skates make?
2 in 8 how many times?



4. How many pairs of gloves are there in 10
gloves?

2 in 10 how many times?

Repeat the table:

2 in 2, once.

2 in 12, 6 times,

2 in 4, 2 times.

2 in 14, 7 times,

2 in 6, 3 times.

2 in 16, 8 times,

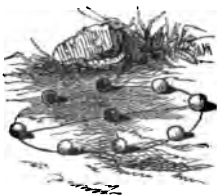
2 in 8, 4 times.

2 in 18, 9 times,

2 in 10, 5 times.

2 in 20, 10 times.

LESSON XLVII.



1. Albert gave his 3 brothers 9 marbles, to be shared equally between them. How many did each receive?



2. At 3 cents each, how many pencils can be bought for 15 cents?

Repeat the table:

3 in 3, once.	3 in 18, 6 times.
3 in 6, 2 times.	3 in 21, 7 times.
3 in 9, 3 times.	3 in 24, 8 times.
3 in 12, 4 times.	3 in 27, 9 times.
3 in 15, 5 times.	3 in 30, 10 times.

LESSON XLVIII.



1. If 4 vests cost 16 dollars, what cost 1 vest?
4 in 16 how many times?

Repeat the table:

4 in 4, once.	4 in 24, 6 times.
4 in 8, 2 times.	4 in 28, 7 times.
4 in 12, 3 times.	4 in 32, 8 times.
4 in 16, 4 times.	4 in 36, 9 times.
4 in 20, 5 times.	4 in 40, 10 times.

LESSON XLIX.

Repeat the table :

5 in 5, once.	5 in 30, 6 times.
5 in 10, 2 times.	5 in 35, 7 times.
5 in 15, 3 times.	5 in 40, 8 times.
5 in 20, 4 times.	5 in 45, 9 times.
5 in 25, 5 times.	5 in 50, 10 times.



1. If 5 men are required to row one boat, how many boats can 30

men row ?

5 in 30 how many times ?

2. Thomas divided 45 peaches equally among 5 of his schoolmates. How many peaches did each receive ?

5 in 45 how many times ?

LESSON L.

Repeat the table :

6 in 6, once.	6 in 36, 6 times.
6 in 12, 2 times.	6 in 42, 7 times.
6 in 18, 3 times.	6 in 48, 8 times.
6 in 24, 4 times.	6 in 54, 9 times.
6 in 30, 5 times.	6 in 60, 10 times.



1. If one ear of corn is required to feed 6 chickens, how many ears of corn will it take to feed 42 chickens ?

6 in 42 how many times ?

2. At 6 cents each, how many melons can be bought for 24 cents ?

6 in 24 how many times ?

LESSON LI.

Repeat the table :

7 in 7, once.	7 in 42, 6 times.
7 in 14, 2 times.	7 in 49, 7 times.
7 in 21, 3 times.	7 in 56, 8 times.
7 in 28, 4 times.	7 in 63, 9 times.
7 in 35, 5 times.	7 in 70, 10 times.



1. If 28 roses are divided equally between 7 children, how many will each receive?

4 in 28 how many times?

2. At 7 cents a pound, how many pounds of rice can be bought for 56 cents?

7 in 56 how many times?

LESSON LII.

Repeat the table :

8 in 8, once.	8 in 48, 6 times.
8 in 16, 2 times.	8 in 56, 7 times.
8 in 24, 3 times.	8 in 64, 8 times.
8 in 32, 4 times.	8 in 72, 9 times.
8 in 40, 5 times.	8 in 80, 10 times.



1. If one quart of cherries cost 8 cents, how many quarts of cherries may be bought for 32 cents?

8 in 32 how many times?

2. Francis bought 8 writing-books for 80 cents. How much were the writing-books apiece?

8 in 80 how many times?

LESSON LIII.

Repeat the table :

9 in 9, once.	9 in 54, 6 times.
9 in 18, 2 times.	9 in 63, 7 times.
9 in 27, 3 times.	9 in 72, 8 times.
9 in 36, 4 times.	9 in 81, 9 times.
9 in 45, 5 times.	9 in 90, 10 times.

1. If a soldier can buy a gun for 9 dollars, how many guns can he buy for 18 dollars ?

9 in 18 how many times ?

2. If 9 dollars will buy a barrel of flour, how many barrels of flour can be bought for 63 dollars.

9 in 63 how many times.

LESSON LIV.

Repeat the table :

10 in 10, once.	10 in 60, 6 times.
10 in 20, 2 times.	10 in 70, 7 times.
10 in 30, 3 times.	10 in 80, 8 times.
10 in 40, 4 times.	10 in 90, 9 times.
10 in 50, 5 times.	10 in 100, 10 times.

1. When one fish costs 10 cents, how many fishes can be bought for 40 cents ?

10 in 40 how many times ?

2. At 10 cents a yard, how many yards of cloth can be bought for 90 cents ?

10 in 90 how many times ?

LESSON LV.



1. How many dogs, at 5 dollars each, can be bought for 25 dollars? Why?

ANS. *Since 5 dollars will buy one dog, as many dogs can be bought for 25 dollars as 5 is contained times in 25, or 5. Therefore, at 5 dollars each, 5 dogs can be bought for 25 dollars.*

2. How many toy-books, at 3 cents each, can be bought for 18 cents? Why?

3. How many marbles, at 1 cent apiece, can be bought for 9 cents? Why?

4. If 8 books cost 24 cents, what will one book cost? Why?

5. Arthur walked 36 miles in 9 days; how many miles did he walk each day? Why?

LESSON LVI.



1. A sportsman in shooting 6 times shot 30 ducks, killing the same number at each shot. How many ducks did he kill at a shot? Why?

2. At 7 cents a quart, how many quarts of nuts can be bought for 49 cents? Why?

3. At 10 cents a pound, how many pounds of sugar can be bought for 50 cents? Why?

4. Alfred gave 24 apples for 6 oranges. How many apples did he give for 1 orange? Why?

5. How many skeins of silk, at 5 cents a skein, can be bought for 35 cents? Why?

LESSON LVII.



1. 2 pigs are eating their supper, and 1 has had his and gone away. How many pigs in all?

2. How many are 3 and 0? 3 and 6? 3 and 3? 3 and 5? 3 and 8?

3. How many are 4 and 4? 4 and 5? 4 and 7? 4 and 6? 4 and 10?

4. How many are 5 and 5? 5 and 1? 5 and 2? 5 and 8? 5 and 6?

5. How many are 6 and 1? 6 and 2? 6 and 7? 6 and 8? 6 and 9?

6. How many are 7 and 2? 7 and 0? 7 and 3? 7 and 5? 7 and 8? 7 and 10?

7. How many are 8 and 1? 8 and 2? 8 and 4? 8 and 8? 8 and 10?

8. How many are 9 and 3? 9 and 5? 9 and 8? 9 and 7? 9 and 6? 9 and 10?

9. How many are 10 and 0? 10 and 1? 10 and 2? 10 and 5? 10 and 10?

10. Levi has 6 cents, and his father gave him 6 more. How many cents then had he? Why?

11. Charles has in one pocket 7 chestnuts, and in the other 9 more. How many has he in both?

12. In a park there were seen 4 squirrels running on the ground, and 10 on the trees. How many squirrels were there in all?

LESSON LXVIII.



1. In a store-room 4 mice are on the shelves and 6 on the floor. How many in all? Why?
2. A man bought a load of wood for 6 dollars, and a barrel of flour for 9 dollars. How much did both cost?
3. In one field there are 5 oxen feeding, and in another 7. How many oxen are there in both fields?
4. 3 years ago George was 8 years old. How old is he now?
5. Flora recited 5 perfect lessons yesterday, and 5 more to-day. How many did she recite both days?
6. In a cage are 4 old birds, and 8 young birds. How many birds are in the cage?
7. A man bought a chair for 7 dollars, and a desk for 8 dollars. How many dollars did both cost?

LESSON LIX.



1. Jane spent 3 cents for candy, and 9 cents for a book? How much did she spend in all?
2. Albert rode 8 miles in the morning, and 9 in the afternoon. How many miles did he ride in all?
3. Caleb, having spent 9 cents, found he had 10 remaining? How many cents had he at first?
4. A farmer sold to one man 3 sheep, to another 3, and then found he had 7 remaining. How many had he at first?
5. Henry received 4 merit-marks, Rollo 5, and Samuel 7. How many merit-marks did they all receive?
6. Jasper has 4 marbles, Peter 3, and Ezra 6. How many marbles have they all?
7. James is 4 years old, Arthur 2 years, and Edward 1 year. What is the sum of their ages?
8. Jane has 9 cents, Mary 8, and Lydia 5. How many cents have they all?
9. Maria gave her sister 3 apples, lost 2, and had 9 left. How many had she at first?
10. A lady bought a dress for 8 dollars, a bonnet for 9 dollars, and a pair of gloves for 1 dollar. How much did they all cost?
11. If you give 10 cents for an inkstand, 5 for a pen, and 3 for a pencil, how much will they all cost?
12. Eva paid 8 cents for a comb, 4 cents for thread, and had left 2 cents. How much had she at first?

LESSON LX.



1. There were 6 butterflies on the ground but 5 have flown away; how many remain

2. 2 from 2 leaves how many? 2 from 2 from 4? 2 from 10?

3. 3 from 4 leaves how many? 3 from 3 from 10? 3 from 9?

4. 4 from 7 leaves how many? 4 from 4 from 9? 4 from 5?

5. 5 from 9 leaves how many? 5 from 5 from 7? 5 from 8? 5 from 10?

6. 6 from 7 leaves how many? 6 from 6 from 9? 6 from 11? 6 from 12?

7. 7 from 0 leaves how many? 7 from 8 from 15? 8 from 17? 10 from 16?

8. Andrew is 19 years old, and Jason is How much older is Andrew than Jason?

LESSON LXI.



1. John has 3 apples, and William has 3. How many more has John than William? Why?

2. Samuel caught 8 birds, but let 7 of them escape? How many had he left?

3. Isabel is 13 years old, and Susan only 3. How many years older is Isabel than Susan?

4. 12 black-birds were on a fence, but 3 of them have flown away. How many then remain?

5. James had 11 figs, and ate 4 of them. How many has he left?

6. Walter bought 10 slate-pencils, and gave 9 of them away. What number then remained?

7. Gave 11 dollars to Emily, and 7 to Betsey. How many more dollars were given to Emily than to Betsey?

8. Sold a cloak for 14 dollars, and received as part pay 9 dollars. How many dollars remained due?

9. Gave 10 cents for apples, and 12 cents for peaches. How much more was given for the peaches than for the apples?

10. Andrew had 9 chickens, but the hawks have taken 4 of them. How many remain?

11. Edwin had 20 cents, but has given away 10 in charity. How many cents has he left?

LESSON LXII.



1. Ellen has 9 chickens; 7 of them are light-colored and the remainder dark. How many of them are dark-colored?

2. In a class of 9 boys, only 2 had got their lessons. How many failed to have their lessons?

3. Eli rode 12 miles, and walked 6. How much further did he ride than walk?

4. Paid for a coat 13 dollars, and for a pair of pants 7. How many dollars did the coat cost more than the pants?

5. Nathan bought a slate for 8 cents, and sold it for 13 cents. How much did he gain?

6. A man bought a gun for 11 dollars, and sold it for 9. How much did he lose?

7. From a bucket of water containing 14 quarts there have been taken out 7 quarts. How much is left in the bucket?

8. 16 swallows light on a barn, and 10 of them fly off again. How many remain?

9. Henry is 18 years old, and Willie 9 years. How many years older is Henry than Willie?

10. John answered 19 questions, and Charles only 10. How many more questions did John answer than Charles?

11. If you have 20 dollars, and should lose 10 of them, how many dollars would you have left?

LESSON LXIII.



1. John's dog caught 19 rabbits in two weeks ; 8 of them the first week, and the remainder the second week. How many did he catch the second week ? Why ?

2. Helen found in the orchard 15 apples ; after she had given 4 of them to Mary, and 5 to Sarah, how many had she left ?

3. Jonathan had 6 marbles, and Peter gave him 3 more ; but on the way to school he lost 4 of them. How many had he then left ? Why ?

4. From a flock of 18 sheep the dogs killed 8, and 1 died. How many remained ?

5. Jacob picked 6 quarts of berries one day, and the next day 8 quarts, and sold 9 quarts. How many quarts of berries did he keep ?

6. 17 pigeons were flying together ; 6 of them were shot at one time, and 2 at another. How many of the pigeons escaped ?

7. Edgar had 13 chestnuts, but gave Edwin 3, George 2, and Jane 4. How many had he left ?

8. James gathered 16 quarts of berries, and sold 6 quarts to one man, and 2 quarts to another. How many then had he left ?

9. Edwin earned 18 dollars. After giving his mother 7 dollars, and his sister 1 dollar, how many dollars had he left ?

10. Bought a hat for 5 dollars and a vest for 5 dollars, and gave in payment a 20 dollar bill. How many dollars should be paid back ?

LESSON LXIV.



1. 2 boys are coasting and 3 times as many are skating. How many are skating?

2. How many are 2 times 2? 2 times 2 times 5? 2 times 4? 2 times 7?

3. How many are 3 times 1? 3 times 3 times 6? 3 times 8? 3 times 10?

4. How many are 4 times 3? 4 times 4 times 4? 4 times 9? 4 times 1?

5. How many are 5 times 3? 5 times 5 times 7? 5 times 0? 5 times 10?

6. How many are 6 times 2? 6 times 6 times 6? 6 times 7? 6 times 9?

7. How many are 7 times 3? 7 times 7 times 7? 7 times 8? 7 times 10?

8. How many are 8 times 2? 8 times 8 times 7? 8 times 8? 8 times 10?

LESSON LXV.

1. How many are 8 times 1? 8 times 2?
8 times 4? 8 times 6? 8 times 9?

2. How many are 9 times 2? 9 times 3?
9 times 7? 9 times 6? 9 times 10?

3. How many are 10 times 1? 10 times 2?
10 times 6? 10 times 4? 10 times 10?

4. How many are 2 times 6? 3 times 4?
5 times 8? 4 times 7? 6 times 3? 9 times 9?

5. How many are 6 times 0? 6 times 1?
2 times 10? 4 times 10? 5 times 2? 7
times 2? 7 times 9?

6. When sugar is sold at 8 cents a pound,
how much must be paid for 3 pounds? Why?

LESSON LXVI.

1. John has 5 marbles, and James has 6
times as many as John. How many has James?
Why?

2. At 4 dollars apiece, what cost 8 sheep?
Why?

3. At 5 cents a quart, how much must be
paid for 3 quarts of milk?

4. Charles found 3 eggs, and Alfred 6 times
as many. How many did Alfred find?

5. If Henry write 7 lines a day, how many
will he write in 6 days?

6. If one pound of starch cost 8 cents,
what will 5 pounds cost?

LESSON LXVII.



1. Ellen saw in a pool 2 frogs, and in a pond 7 times as many. How many did she see in the pond?
2. A farmer raised 5 bushels of peas, and 7 times as many bushels of beans. How many bushels of beans did he raise?
3. If one cord of wood cost 8 dollars, how many dollars will 6 cords cost?
4. How many cents must be paid for 9 pounds of cheese, at 10 cents a pound?
5. There are on the lake 6 boats, and 10 persons in each boat. How many persons are in all the boats?
6. If 8 apples will buy one ruler, how many apples will it take to buy 7 rulers?
7. How many roses are on 9 bushes, if there are 6 on each bush?
8. What cost 9 yards of cloth, at 2 dollars a yard? Why?
9. What cost 6 pairs of boots, at 4 dollars a pair? Why?
10. If Robert can walk 3 miles in one hour, how many miles can he walk in 7 hours? Why?
11. What will cost 6 loaves of bread, at 8 cents a loaf? Why?
12. How many cents must be paid for 8 slates, at 10 cents each?

LESSON LXVIII.

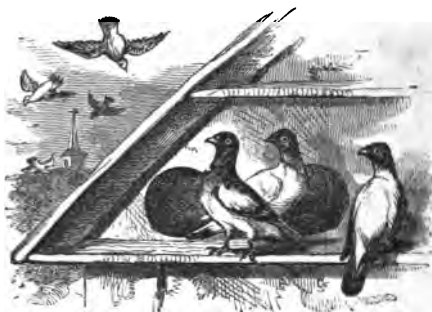


1. What cost 9 lambs at 3 dollars each? Why?
2. If there are 8 panes of glass in one window, how many panes are there in 7 windows?
3. At 10 cents an hour, how many cents may be earned in 10 hours?
4. Augustus picked 9 quarts of berries. If he gets 9 cents a quart for them, how many cents will he obtain?
5. If a scholar can perform 9 examples in one hour, how many can he perform in 7 hours?
6. If Samuel should recite 6 perfect lessons in one day, how many perfect lessons would he recite in 10 days?

LESSON LXIX.

1. How many times 2 in 4? In 8? In 6? In 10? In 2?
2. How many times 3 in 9? In 6? In 12? In 15? In 27?
3. How many times 4 in 4? In 16? In 20? In 32? In 40?
4. How many times 5 in 10? In 25? In 30? In 40? In 5? In 50?
5. How many times 6 in 12? In 18? In 6? In 42? In 60?
6. How many times 7 in 14? In 21? In 35? In 49? In 63?

LESSON LXX.



1. Edward had 7 doves, and sold 3 for 30 cents; how much did he get apiece for them?
2. How many times 9 in 18? In 36? In 54? In 45? In 9? In 63? In 90?
3. How many times 10 in 20? In 30? In 70? In 10? In 50? In 90? In 100?
4. How many times 2 in 18? In 12?
5. How many times 3 in 3? In 21?
6. How many times 5 in 35? In 45?
7. How many times 6 in 24? In 54?
8. How many times 8 in 32? In 80?
9. How many times 9 in 27? In 72?
10. How many times 10 in 40? In 70?
11. How many times 7 in 28? In 56?
12. How many times 8 in 64? In 72?
13. How many times 9 in 45? In 81?
14. How many times 10 in 80? 9 in 63?

LESSON LXXI.



1. If a man earn 2 dollars a day, how many days will it take him to earn 18 dollars?

2. At 2 cents each, how many oranges can be bought for 20 cents? Why?

3. For 24 cents how many pencils may be bought, at 3 cents apiece? Why?

4. How many pens, at 4 cents apiece, can you buy for 28 cents?

5. If a quart of milk cost 5 cents, how many quarts can be bought for 30 cents?

6. At 7 cents a pound, how many pounds of rice can be bought for 42 cents?

7. How many hats, at 4 dollars apiece, can be bought for 16 dollars?

8. If you have 32 pears to divide equally between 8 boys, how many can you give each of them?

9. How many pounds of veal, at 9 cents a pound, can you buy for 54 cents?

10. How many dozen of eggs, at 10 cents a dozen, will 50 cents buy?

11. Mary distributed 45 apples equally between 9 schoolmates. How many did she give to each?

12. When chestnuts are 8 cents a quart, how many quarts can you buy for 80 cents?

13. A man bought 6 barrels of flour for 48 dollars. How much did he pay a barrel?

14. How many pounds of sugar, at 9 cents a pound, can be bought for 90 cents?

LESSON LXXII.

1. 18 are how many times 3 ?
2. 12 are how many times 4 ?
3. 16 are how many times 2 ?
4. 21 are how many times 7 ?
5. 32 are how many times 8 ?
6. 4 times 6 are how many times 8 ?
7. 2 times 9 are how many times 6 ?
8. 2 times 10 are how many times 5 ?
9. 3 times 6 are how many times 9 ?
10. How many dozen of eggs, at 10 cents a dozen, must be given for 5 pounds of steak at 8 cents a pound ?
11. How many cords of wood, at 5 dollars a cord, must be given for 10 yards of broad cloth, at 4 dollars a yard ?
12. If 4 oranges cost 12 cents, what will 10 oranges cost ?
13. If 5 quarts of milk cost 30 cents, what will 3 quarts cost ?
14. How many caps can be bought for 12 dollars, when 3 caps cost 6 dollars ?
15. How many copy-books may be made from 24 sheets of paper, when 8 sheets make 2 copy-books ?
16. If a horse consume 16 bushels of corn in 8 weeks, how many will he consume in 12 weeks ?
17. If 3 barrels of flour cost 27 dollars, how many dollars will 7 barrels cost ?

LESSON LXXIII.

One half.

One half.

1. If a line or any thing be divided into 2 equal parts, what is one of those parts called?

Ans. *One half.*

2. How many halves make a whole one?

Ans. *Two.*

One third.

One third.

One third.

4. How many thirds make a whole one?

Ans. *Three.*

3. If a line or any thing be divided into 3 equal parts, what is one of those parts called?

Ans. *One third.*

One fourth.

One fourth.

One fourth.

One fourth.

5. If a line or any thing be divided into 4 equal parts, what is one of those parts called?

Ans. *One fourth.*

6. How many fourths make a whole one?

Ans. *Four.*

One fifth.

One fifth.

One fifth.

One fifth.

One fifth.

7. If a line or any thing be divided into 5 equal parts, what is one of those parts called?

Ans. *One fifth.*

8. How many fifths make a whole one?

9. If a line or any thing be divided into 6 equal parts, what is one of those parts called?

Ans. *One sixth.*

10. How many sixths make a whole one?

LESSON LXXIV.

1. When anything is divided into 7 equal parts, what is one of those equal parts called?

Ans. *One seventh.*

2. How many sevenths make a whole one?

3. What is meant by one eighth of anything?

Ans. *One of the eight equal parts into which a thing is divided.*

4. How many eighths make a whole one?

5. What is meant by one ninth of anything?

6. How many ninths make a whole one?

7. What is meant by one tenth of anything?

8. How many tenths make a whole one?

9. James had 2 fourths of a dollar, and his mother gave him one fourth more. How many fourths of a dollar then had he?

10. 2 fifths of an acre are planted with beets, and 2 fifths with carrots. What part of an acre is planted with both?

11. 3 eighths and 4 eighths are how many eighths?

12. George gave 2 sixths of a melon to his brother, and to his sister 3 sixths. What part did he give away in all?

13. Bought a book for 2 fourths of a dollar, and sold it for 3 fourths of a dollar. How much is gained by the sale?

14. If you should have 5 sevenths of a pound of candy, and should give away 3 sevenths of a pound, how much would you have left?

15. 8 ninths less 6 ninths are how many ninths?

LESSON LXXV.



1. How many halves are there in one orange?

2. How many halves in 2 oranges? Why?

Ans. Since there are 2 halves in one orange, in 2 oranges there are 2 times 2 halves, or 4 halves.

3. How many halves in 3 oranges? In 4 oranges? In 5 oranges? In 6 oranges?

4. How many thirds in 2 apples? Why?

5. How many thirds in 3 apples? In 4 apples?

6. How many fourths in one melon? In 2 melons? Why?

7. How many fourths in 3 pears? In 5 pears?

8. If one half of a melon cost 6 cents, how much will 2 halves, or a whole melon, cost? Why?

Ans. Since one half cost 6 cents, 2 halves or a whole melon will cost 2 times 6 cents, or 12 cents.

9. If one third of a pie cost 4 cents, how much will a whole pie cost?

10. 4 is one third of what number? Why?

11. If one fifth of an acre of land is worth 6 dollars, how much is 2 fifths worth? Why?

12. If one fourth of a yard of cloth cost 8 cents, how much will 2 fourths cost? 3 fourths? A whole yard?

LESSON LXXVI.

1. In 4 halves of a dollar, how many dollars? Why?

ANS. *Since there are 2 halves in one dollar, halves of a dollar there are as many dollars as 2 is contained times in 4 halves, or 2 dollars.*

2. In 6 halves of an orange, how many oranges? In 8 halves? In 10 halves?

3. In 6 thirds of an apple, how many apples?

4. How many whole ones in 4 fourths? In 12 fourths? In 16 fourths?

5. How many whole ones in 10 fifths? In 12 fifths?

6. How many whole ones in 12 sixths? In 18 sixths?

7. If a yard of ribbon cost 4 cents, how much will one half of a yard cost? Why?

ANS. *Since a whole yard cost 4 cents, one half yard will cost one half of 4 cents, or 2 cents.*

8. If a melon is worth 10 cents, how much is half a melon worth? Why?

9. One half of 10 is how many?

10. If a cord of wood is worth 8 dollars, how much is one fourth of a cord worth?

11. One fourth of 8 is how many?

12. At 10 dollars a barrel, what will one of a barrel of flour cost? Two fifths?

13. One third of 12 is how many?

14. A man is 35 years old, and his son is seventh as old. How old is his son?

15. At 63 cents a yard, what is one ninth of a yard of cloth worth? Four ninths?

WRITTEN ARITHMETIC.

LESSON I.

1. WHAT is that which you have now been attending to called ?

ANS. *Arithmetic.*

2. Of what does Arithmetic treat ?

ANS. *Numbers.*

3. What does Arithmetic teach ?

ANS. *How to reckon by numbers.*

NOTATION AND NUMERATION.

1. Write on the slate or black-board, in figures: one, five, six, four, seven, eight, ten, nine.

2. What is the writing of numbers in figures called ?

ANS. *Notation.*

3. Read the following figures: 2, 5, 6, 4, 8, 10, 9, 11, 12.

4. What is the reading of figures called ?

ANS. *Numeration.*

5. Repeat the table :

10 Units	make	1 Ten.
10 Tens	"	1 Hundred.
10 Hundreds	"	1 Thousand.

6. How many units make 1 ten ? 2 tens ? 3 tens ? 4 tens ? 5 tens ? 6 tens ? 7 tens ? 8 tens ? 9 tens ? 10 tens ?

7. How many tens in 20 units ? In 30 units ? In 40 units ? In 50 units ? In 60 units ? In 80 units ? In 90 units ? In 100 units ?

LESSON II.

NUMERATION TABLE.

Thousands.	Hundreds.	Tens.	Units.	
			9,	read Nine.
	1	6,	"	Sixteen.
4	2	3,	"	Four hundred and twenty-three. [eight.
5	7	6	8,	" Five thousand, seven hundred and sixty-

8. Numerate and read the number expressed by the figure 9, in the first line of the table.

ANS. 9 *units*, read *nine*.

9. Numerate and read the number expressed by the figures 1, 6, in the second line of the table.

ANS. 6 *units* and 1 *ten*, read *sixteen*.

10. Numerate and read the number expressed by the figures 4, 2, 3, in the third line of the table.

ANS. 3 *units*, 2 *tens*, and 4 *hundreds*, read *four hundred and twenty-three*.

11. Numerate and read the number expressed by the figures 5, 7, 6, 8, in the fourth line of the table.

ANS. 8 *units*, 6 *tens*, 7 *hundreds*, and 5 *thousands*, read *five thousand seven hundred and sixty-eight*.

12. What then, are the names given to the several places of figures in the table, beginning at the right-hand place?

ANS. *Units, tens, hundreds, thousands*.

13. Numerate and express in words the numbers represented by the following figures:

6	23	106	1660
8	44	312	3101
10	55	578	7102

LESSON III.

1. What does the figure 1 written alone express?

ANS. 1 *unit, or one.*

2. What does the figure 1 with 0 written on the right of it express?

ANS. 1 *ten and no units, or ten.*

3. What does the figure 3 with 3 written on the right of it express?

ANS. 3 *tens and 3 units, or thirty-three.*

4. What does the figure 1 with two 0's on the right express?

ANS. 1 *hundred, no tens, and no units, or one hundred.*

5. Write the figures standing for one hundred.

6. What does 11 with 0 on the right of it express?

ANS. 1 *hundred, 1 ten, and no units, or one hundred and ten.*

7. Write the figures standing for one hundred and ten.

8. Write the figures standing for one hundred and eleven.

9. How do you express one thousand by figures?

ANS. *By writing 1 with three 0's at the right of it.*

10. Write the figures standing for one thousand.

11. Express in figures :—

Seventeen. Two hundred and three.

Seventy-one. Three hundred and three.

Ninety-three. One thousand and one hundred.

LESSON IV.

1. What is the method of expressing numbers by figures called ?

ANS. *The Arabic method.*

2. Why is it so called ?

ANS. *Because it was obtained from the Arabs.*

3. What characters besides figures are sometimes used in expressing numbers ?

ANS. *Letters.*

4. Name the letters thus used ?

ANS. *I, V, X, L, C, D, M.*

5. What does the letter I stand for ?

ANS. *One.*

6. What does the letter V stand for ?

ANS. *Five.*

7. What does the letter X stand for ?

ANS. *Ten.*

8. What does the letter L stand for ?

ANS. *Fifty.*

9. What does the letter C stand for ?

ANS. *One hundred.*

10. What does the letter D stand for ?

ANS. *Five hundred.*

11. What does the letter M stand for ?

ANS. *One thousand.*

12. What is the method of expressing numbers by letters called ?

ANS. *The Roman method.*

13. Why is it so called ?

ANS. *Because it was obtained from the Romans.*

LESSON V.

1. What is the effect of repeating a letter?

ANS. *Its value is taken as many times as the letter.*

2. If, then, I stands for one, how many do three I's stand for?

ANS. *Three.*

3. What is expressed by writing a letter of a smaller value before a larger?

ANS. *Their difference is expressed.*

4. If, then, X stands for ten, how many does I X stand for?

ANS. *One from ten, or nine.*

5. What is expressed by writing a letter of a smaller value after a letter for one of a larger?

ANS. *Their sum is expressed.*

6. If, then, L stands for fifty, how many does LI stand for?

ANS. *Fifty and one, or fifty-one.*

Numbers.	Letters.	Numbers.	Letters.
One,	I.	Thirty,	XXX.
Two,	II.	Forty,	XL.
Three,	III.	Fifty,	L.
Four,	IV.	Sixty,	LX.
Five,	V.	Seventy,	LXX.
Six,	VI.	Eighty,	LXXX.
Seven,	VII.	Ninety,	XC.
Eight,	VIII.	One hundred,	C.
Nine,	IX.	Two hundred,	CC.
Ten,	X.	Five hundred,	D.
Eleven,	XI.	Six hundred,	DC.
Twenty,	XX.	One thousand,	M.

LESSON VI.

ADDITION.

1. How many are 7 and 3? 6 and 5?
2. What is the collecting of two or numbers into one sum called?

Ans. *Addition.*

3. What is the sum of two or more numbers called?

Ans. *Their amount.*

EXERCISES FOR THE SLATE.

(1.)	(2.)	(3.)	(4.)	(5.)	
2	3	4	3	5	
2	2	3	3	1	
1	1	2	1	3	
Ans. 5					
(7.)	(8.)	(9.)	(10.)	(11.)	(
6	7	8	9	5	
3	4	5	3	6	
(13.)	(14.)	(15.)	(16.)	(17.)	(
14	17	10	31	43	
4	2	12	37	26	
(19.)	(20.)	(21.)	(22.)	(23.)	(
17	16	17	25	42	
4	18	8	15	19	
(25.)	(26.)	(27.)	(28.)	(29.)	(
40	51	21	10	42	
60	72	93	91	44	

LESSON VII.

(32.)	(33.)	(34.)	(35.)	(36.)
17	60	13	14	16
11	70	33	30	16
<u>42</u>	<u>55</u>	<u>40</u>	<u>12</u>	<u>34</u>
(38.)	(39.)	(40.)	(41.)	(42.)
564	271	924	516	810
432	808	442	731	201
<u>500</u>	<u>520</u>	<u>412</u>	<u>102</u>	<u>401</u>
(44.)	(45.)	(46.)	(47.)	(48.)
612	171	143	816	771
390	301	261	191	117
<u>10</u>	<u>112</u>	<u>412</u>	<u>101</u>	<u>231</u>
(50.)	(51.)	(52.)	(53.)	(54.)
257	126	391	182	910
<u>861</u>	<u>275</u>	<u>710</u>	<u>921</u>	<u>297</u>
(56.)	(57.)	(58.)	(59.)	(60.)
413	103	129	812	700
142	451	310	104	511
<u>603</u>	<u>261</u>	<u>230</u>	<u>222</u>	<u>132</u>
(62.)	(63.)	(64.)	(65.)	
5410	7102	8201	9102	
<u>3444</u>	<u>1703</u>	<u>2143</u>	<u>1034</u>	
(67.)	(68.)	(69.)	(70.)	
9102	1111	1345	9810	
<u>6132</u>	<u>9109</u>	<u>19</u>	<u>1518</u>	

LESSON VIII.

(71.)	(72.)	(73.)	(74.)	(75.)
1241	6130	2712	1717	1007
3212	1021	7181	1202	2100
4106	1210	1104	1102	1527
<u>1210</u>	<u>1418</u>	<u>3010</u>	<u>3370</u>	<u>1018</u>

76. Add together 4, 6, 3, and 10.

77. Add together 10, 15, 11, and 35.

78. Add together 106, 412, and 112.

79. Add together 316, 532, and 230.

80. Add together 1631, 8102, and 3120.

81. A farmer has in one pasture 162 sheep and in another pasture 217. How many has he in both pastures?

82. A man gave 125 dollars for a chaise, 250 dollars for a horse, and 30 dollars for a harness. How much did they all cost him?

83. Samuel is 14 years old, John 19 years and their father 50 years. What is the sum of their ages?

84. In an orchard 421 trees bear apples, 125 bear pears, 78 bear cherries, 69 bear peaches, and 10 bear plums. How many trees are there in all?

85. A merchant paid 1630 dollars for cloth and 5167 dollars for other goods. How much did he pay for the whole?

86. A butcher sold 475 pounds of beef to one man, 684 pounds to another, and 986 pounds to another. How many pounds did he sell in all?

LESSON IX.

SUBTRACTION.

1. If 4 be taken from 9, how many will remain? 6 from 7? 8 from 15?

2. What is the taking of one number from another to find their difference called?

Ans. *Subtraction.*

3. What is the larger of the two numbers given in Subtraction called?

Ans. *The Minuend.*

4. What is the smaller of the two numbers given in Subtraction called?

Ans. *The Subtrahend.*

5. What is the result thus obtained called?

Ans. *The Difference or Remainder.*

EXERCISES FOR THE SLATE.

(1.)	(2.)	(3.)	(4.)	(5.)	(6.)
From 8	9	7	6	9	8
Take 5	4	3	2	7	1
—	—	—	—	—	—
(7.)	(8.)	(9.)	(10.)	(11.)	(12.)
4	5	9	7	8	9
2	3	8	6	8	3
—	—	—	—	—	—
(13.)	(14.)	(15.)	(16.)	(17.)	(18.)
12	13	17	19	18	16
2	3	4	8	8	5
—	—	—	—	—	—
(19.)	(20.)	(21.)	(22.)	(23.)	(24.)
11	12	15	14	17	20
5	6	9	5	7	10
—	—	—	—	—	—

LESSON X.

	(25.)	(26.)	(27.)	(28.)	(29.)	(30.)
From	22	26	29	35	38	47
Take	10	12	13	15	14	23
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	(31.)	(32.)	(33.)	(34.)	(35.)	(36.)
	55	58	62	73	81	96
	24	41	12	32	41	75
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	(37.)	(38.)	(39.)	(40.)	(41.)	(42.)
	28	37	21	32	25	44
	19	26	16	24	16	42
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	(43.)	(44.)	(45.)	(46.)	(47.)	(48.)
	55	63	71	84	81	94
	41	58	19	65	11	85
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	(49.)	(50.)	(51.)	(52.)	(53.)	(54.)
	138	156	163	247	452	197
	24	45	41	36	31	14
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	(55.)	(56.)	(57.)	(58.)	(59.)	(60.)
	363	728	556	479	623	784
	141	128	323	246	101	342
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	(61.)	(62.)	(63.)	(64.)	(65.)	(66.)
	783	894	932	844	724	975
	572	265	303	326	617	846
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	(67.)	(68.)	(69.)	(70.)	(71.)	(72.)
	547	568	433	455	719	880
	256	370	152	163	431	780
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

LESSON XI.

	(73.)	(74.)	(75.)	(76.)	(77.)
From	2602	2162	7160	1000	8443
Take	1402	1052	1000	100	4523

- | | |
|----------------------|--------------------------|
| 78. From 14 take 7. | 83. From 68 take 9. |
| 79. From 19 take 11. | 84. From 87 take 63. |
| 80. From 34 take 8. | 85. From 92 subtract 13. |
| 81. From 75 take 25. | 86. From 68 subtract 16. |
| 82. From 83 take 84. | 87. From 77 subtract 28. |

88. If a boat-load of corn be bought for 415 dollars and sold for 528 dollars, how many dollars will be gained by the sale?

89. A house which cost 1785 dollars was sold for 1672 dollars. For how many dollars less than the cost was it sold?

MULTIPLICATION.

- How many are 6 times 7? 4 times 3?
- What is this short way of taking a number ~~and~~ certain number of times called?

ANS. *Multiplication.*

- What is the number to be multiplied or ~~taken~~ called?

ANS. *The Multiplicand.*

- What is the number given to multiply ~~by~~ called?

ANS. *The Multiplier.*

- What is the result, or the number found ~~by~~ multiplying, called?

ANS. *The Product.*

LESSON XII.

EXERCISES FOR THE SLATE.

	(1.)	(2.)	(3.)	(4.)	(5.)	(6.)
Multiply	6	5	7	9	4	8
By	<u>2</u>	<u>4</u>	<u>3</u>	<u>5</u>	<u>7</u>	<u>6</u>
(7.)	(8.)	(9.)	(10.)	(11.)	(12.)	
11	12	12	14	14	13	
<u>3</u>	<u>3</u>	<u>4</u>	<u>2</u>	<u>3</u>	<u>2</u>	
(13.)	(14.)	(15.)	(16.)	(17.)	(18.)	
22	31	23	24	33	44	
<u>3</u>	<u>2</u>	<u>3</u>	<u>2</u>	<u>3</u>	<u>2</u>	
(19.)	(20.)	(21.)	(22.)	(23.)	(24.)	
51	42	62	71	81	52	
<u>4</u>	<u>4</u>	<u>3</u>	<u>5</u>	<u>5</u>	<u>5</u>	
(25.)	(26.)	(27.)	(28.)	(29.)	(30.)	
121	424	841	426	804	128	
<u>4</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>4</u>	<u>5</u>	
(31.)	(32.)	(33.)	(34.)	(35.)	(36.)	
216	412	402	211	201	631	
<u>6</u>	<u>6</u>	<u>7</u>	<u>9</u>	<u>9</u>	<u>7</u>	
(37.)	(38.)	(39.)	(40.)	(41.)	(42.)	
323	410	622	913	412	713	
<u>3</u>	<u>4</u>	<u>4</u>	<u>3</u>	<u>5</u>	<u>2</u>	
(43.)	(44.)	(45.)	(46.)	(47.)	(48.)	
614	735	101	901	420	814	
<u>7</u>	<u>8</u>	<u>9</u>	<u>9</u>	<u>8</u>	<u>8</u>	

LESSON XIII.

	(49.)	(50.)	(51.)	(52.)	(53.)
Multiply	2123	3231	4142	6104	7221
By	<u>8</u>	<u>3</u>	<u>2</u>	<u>2</u>	<u>4</u>

(54.)	(55.)	(56.)	(57.)	(58.)
6013	7102	5211	5212	1234
<u>4</u>	<u>5</u>	<u>5</u>	<u>4</u>	<u>6</u>

(59.)	(60.)	(61.)	(62.)	(63.)
2136	3401	2725	1710	1061
<u>6</u>	<u>6</u>	<u>7</u>	<u>7</u>	<u>8</u>

(64.)	(65.)	(66.)	(67.)	(68.)
4131	7121	6012	2041	8106
<u>8</u>	<u>7</u>	<u>9</u>	<u>9</u>	<u>9</u>

69. Multiply 11 by 4. | 73. Multiply 113 by 6.

70. Multiply 12 by 3. | 74. Multiply 233 by 7.

71. Multiply 23 by 4. | 75. Multiply 761 by 5.

72. Multiply 42 by 5. | 76. Multiply 443 by 8.

77. If a man travel 35 miles in one day, how far will he travel in 9 days?

78. There are 63 gallons in one hogshead. How many gallons in 6 hogsheads?

79. How many are 7 times 162?

80. If a man earn 650 dollars in one year, how many dollars will he earn in 8 years?

81. If the distance through the earth is 7920 miles, and the distance round it three times as much, how many miles is it round the earth?

LESSON XIV.

DIVISION.

1. In 24 how many times 4? How π times 6? How many times 8?

2. What is the process of finding how π times one number is contained in another call

ANS. *Division.*

3. What is the number to be divided call

ANS. *The Dividend.*

4. What is the number by which we divide called?

ANS. *The Divisor.*

5. What is the result of the division called

ANS. *The Quotient.*

6. What is the number which is sometimes left after dividing called?

ANS. *The Remainder.*

EXERCISES FOR THE SLATE.

(1.) Divisor 2)8		(2.) Dividend. 3)18		(3.) 5)25
4 Quotient.				
(4.) 3)36	(5.) 4)48	(6.) 3)69	(7.) 3)39	(8.) 4)44
(10.) 6)42	(11.) 6)72	(12.) 7)84	(13.) 7)49	(14.) 6)36
(16.) 6)90	(17.) 8)88	(18.) 8)96	(19.) 9)90	(20.) 9)99
(22.) 2)642	(23.) 4)844	(24.) 3)639	(25.) 5)510	(26.) 6)

LESSON XV.

(27.)	(28.)	(29.)	(30.)	(31.)
8)816	8)824	7)721	7)847	9)918

(32.)	(33.)	(34.)	(35.)	(36.)
2)43	3)68	4)167	4)847	5)563

21,1 rem.

(37.)	(38.)	(39.)	(40.)	(41.)
4)486	5)256	6)103	7)4900	8)254

- | | |
|----------------------|-----------------------|
| 42. Divide 484 by 4. | 46. Divide 910 by 8. |
| 43. Divide 515 by 5. | 47. Divide 521 by 7. |
| 44. Divide 618 by 6. | 48. Divide 1631 by 4. |
| 45. Divide 847 by 7. | 49. Divide 9199 by 9. |

50. If you divide 48 apples equally between 4 schoolmates, how many will each receive?

51. A certain school of 125 scholars is divided into 5 equal divisions. How many scholars in each division?

52. A bridge is 363 feet long, and consists of 3 arches of equal length. How many feet in each arch.

53. 147 dollars have been equally divided between 7 men. How many dollars did each receive?

54. A farmer has 279 acres of land divided into 9 equal lots. How many acres are there in each lot?

55. 8 is contained in 248 how many times?

56. A man divided equally between his 6 sons 2586 dollars. How many dollars did each receive?

TABLES.

LESSON I.



UNITED STATES MONEY.

10 Mills	make 1 Cent, . . .	market
10 Cents	" 1 Dime, . . .	"
10 Dimes	" 1 Dollar, . . .	"
10 Dollars	" 1 Eagle, . . .	"

ENGLISH MONEY.

4 Farthings . . .	make 1 Penny, . . .	market
12 Pence	" 1 Shilling, . . .	"
20 Shillings . . .	" 1 Pound, . . .	"
21 Shillings sterling	" 1 Guinea, . . .	" g

LESSON II.

AVOIRDUPOIS WEIGHT.

16 Drams	make 1 Ounce, . . .	marked
16 Ounces	" 1 Pound, . . .	"
25 Pounds	" 1 Quarter, . . .	"
4 Quarters	" 1 Hundred-weight, . . .	"
20 Hundred-weight	" 1 Ton, . . .	"

TROY WEIGHT.

24 Grains	make	1 Pennyweight, marked	dwt.
20 Pennyweights	"	1 Ounce,	oz.
12 Ounces	"	1 Pound,	lb.

APOTHECARIES' WEIGHT.

20 Grains (<i>gr.</i>)	make	1 Scruple, marked <i>sc.</i> or \mathfrak{D} .
3 Scruples	"	1 Dram, " <i>dr.</i> " 3.
8 Drams	"	1 Ounce, " <i>oz.</i> " 3.
12 Ounces	"	1 Pound, " <i>lb.</i> " 16.

LESSON III.

CLOTH MEASURE.

2½ Inches	make	1 Nail,	marked na.
4 Nails	"	1 Quarter of a Yard,	qr.
4 Quarters	"	1 Yard,	yd.
3 Quarters	"	1 Ell Flemish,	E. F.
5 Quarters	"	1 Ell English,	E. E.

NOTE. — 2½ is read two and one fourth.

LONG MEASURE.

12 Inches	make	1 Foot,	marked ft.
3 Feet	"	1 Yard,	yd.
5½ Yards, or 16½ Feet,	"	1 Rod, or Pole,	rd.
40 Rods	"	1 Furlong,	fur.
8 Furlongs	"	1 Mile,	m.
3 Miles	"	1 League,	lea.
69½ Miles (nearly)	"	1 Degree,	deg.°
360 Degrees	"	1 Circle of the Earth.	

NOTE. — 5½ and 16½ are read five and one half, and sixteen and one half; 69½ is read sixty-nine and one sixth.

LESSON IV.

SURFACE, OR SQUARE MEASURE.

144 Square inches (sq. in.)	make 1 Square foot,	sq. ft.
9 Square feet	" 1 Square yard,	sq. yd.
30 $\frac{1}{4}$ Square yards	" 1 Square rod or pole, p.	
40 Square rods	" 1 Rood,	R.
4 Roods	" 1 Acre,	A.
640 Acres	" 1 Square mile,	S. M.

NOTE. — This measure is used in measuring surfaces of all kinds.

SOLID, OR CUBIC MEASURE.

1728 Cubic inches (cu. in.)	make 1 Cubic foot,	cu. ft.
27 " feet	" 1 " yard,	cu. yd.
40 " feet	" 1 Ton,	T.
16 " feet	" 1 Cord foot,	c. ft.
8 Cord feet, or }	" 1 Cord of wood,	C.
128 Cubic feet, }		

NOTE. — This measure is used in measuring such things as have length, breadth, and thickness; as timber, stone, &c.

LESSON V.

LIQUID MEASURE.

4 Gills	make 1 Pint,	marked pt.
2 Pints	" 1 Quart,	" qt.
4 Quarts	" 1 Gallon,	" gal.
63 Gallons	" 1 Hogshead,	" hhd.
2 Hogsheads	" 1 Pipe or butt,	" pi.
2 Pipes or 4 Hhds.	" 1 Tun,	" tun.

DRY MEASURE.

2 Pints	make 1 Quart,	marked qt.
4 Quarts	" 1 Gallon,	" gal.
2 Gallons	" 1 Peck,	" pk.
4 Pecks	" 1 Bushel,	" bu.
36 Bushels	" 1 Chaldron,	" ch.

LESSON VI.

MEASURE OF TIME.

60 Seconds (sec.)	make	1 Minute,	marked	m.
60 Minutes	"	1 Hour,	"	h.
24 Hours	"	1 Day,	"	d.
7 Days,	"	1 Week,	"	w.
365 $\frac{1}{4}$ Days, or	}	1 Year,	"	y.
52 Weeks 1 $\frac{1}{4}$ days,				
12 Calendar Months				
	"	1 Year,	"	y.

MONTHS.

1. January	has	31 days.	7. July	has	31 days.
2. February	"	28 "	8. August	"	31 "
3. March	"	31 "	9. September	"	30 "
4. April	"	30 "	10. October	"	31 "
5. May	"	31 "	11. November	"	30 "
6. June	"	30 "	12. December	"	31 "

NOTE. — In leap year, February has 29 days.

LESSON VII.

CIRCULAR MEASURE.

60 Seconds (")	make	1 Minute,	marked	'.
60 Minutes	"	1 Degree,	"	°.
360 Degrees	"	1 Circumference	"	c.

MISCELLANEOUS TABLE.

12 Units	make	1 Dozen.
12 Dozen	"	1 Gross.
12 Gross	"	1 Great Gross.
20 Units	"	1 Score.
24 Sheets of paper	"	1 Quire.
20 Quires	"	1 Ream.

For District Schools.

NEW PRIMARY ARITHMETIC.
INTELLECTUAL ARITHMETIC.
COMMON SCH. ARITHMETIC.

High Schools & Academies.

NATIONAL ARITHMETIC.
TREATISE ON ALGEBRA.
ELEMENTS OF GEOMETRY.

The **NEW PRIMARY ARITHMETIC** is an attractive and interesting book of easy lessons for beginners, to be used in all Primary Schools.

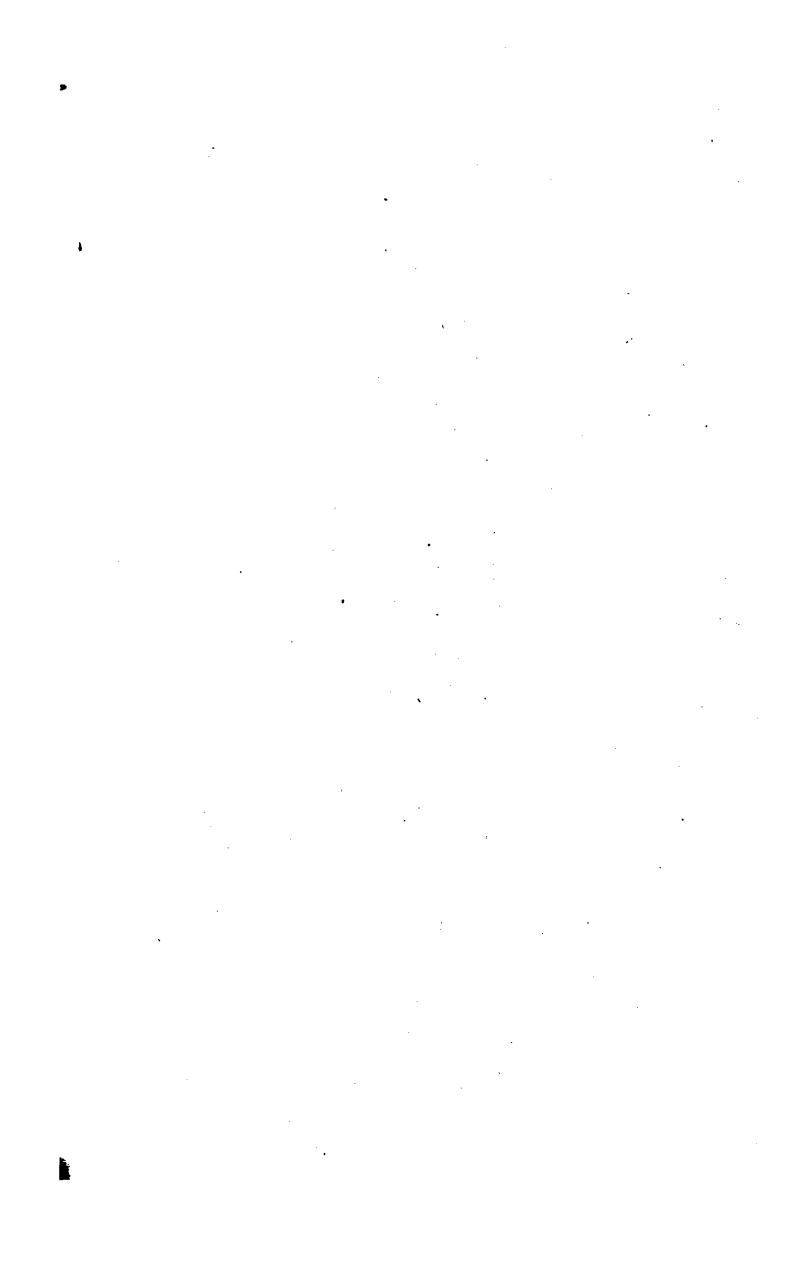
The **INTELLECTUAL ARITHMETIC** is a new work, fully adapted to the *present improved* methods of instruction, avoiding the abrupt transitions and other defects of some books, and carrying the principles of analysis further than any other work of the kind.

The **COMMON SCHOOL ARITHMETIC** is a **COMPLETE SYSTEM** of written Arithmetic for *Common Schools*, being sufficient to prepare the learner for all ordinary business. It contains all the necessary rules relating to *United States Money*, and all the important cases in *Fractions, Percentage, Exchange, Custom House Business, &c.*, which are not always found in more *expensive*, but less *practical* and *common-sense* books.

The **NATIONAL ARITHMETIC** is a thorough theoretical and practical treatise, containing a greater amount and variety of matter, strictly connected with the science, than can be found in any other treatise. As suited to the wants of the High Schools, Academies, Normal Schools, and Commercial Colleges, it is no equal in the English language.

The **TREATISE ON ALGEBRA** furnishes what has been hitherto much desired, a thorough practical and theoretical text-book, suited to the wants of Elementary Schools, as well as Academies, in a single volume, and furnished at a cheap price. Very comprehensive in its plan and details, and progressive in its gradation and problems, it occupies the ground commonly given very inconveniently to two books.

The **ELEMENTS OF GEOMETRY** is simple and elegant in its arrangements, with methods of demonstration adapted to the latest and most improved modes of instruction. The particular attention given to the demonstration of the *con-*





GREENLEAF'S MATHEMATICAL SERIES,

ADAPTED TO ALL CLASSES OF LEARNERS.

New and Carefully Revised Editions.

—♦♦♦—
“*Standard and Imperishable works of their kind; the richest and most comprehensive, as a series, that have appeared in the current nineteenth century.*”—JOS. PERRY, A. M., Prof. of Mathematics, late of Dartmouth College.

For District Schools.

NEW PRIMARY ARITHMETIC.
INTELLECTUAL ARITHMETIC.
COMMON SCH. ARITHMETIC.

High Schools & Academics.

NATIONAL ARITHMETIC.
TREATISE ON ALGEBRA.
ELEMENTS OF GEOMETRY.

The **NEW PRIMARY ARITHMETIC** is an attractive and interesting book of easy lessons for beginners, to be used in all Primary Schools.

The **INTELLECTUAL ARITHMETIC** is a **new work**, fully adapted to the *present improved* methods of instruction, avoiding the abrupt transitions and other defects of some books, and carrying the principles of analysis further than any other work of the kind.

The **COMMON SCHOOL ARITHMETIC** is a **COMPLETE SYSTEM** of written Arithmetic for *Common Schools*, being sufficient to prepare the learner for all ordinary business. It contains all the necessary rules relating to *United States Money*, and all the important cases in *Fractions, Percentage, Exchange, Custom House Business, &c.*, which are not always found in more *expensive*, but less *practical* and *common-sense* books.

The **NATIONAL ARITHMETIC** is a thorough theoretical and practical treatise, containing a greater amount and variety of matter, strictly connected with the science, than can be found in any other treatise. As suited to the wants of the High Schools, Academies, Normal Schools, and Commercial Colleges, it is no equal in the English language.

The **TREATISE ON ALGEBRA** furnishes what has been hitherto much desired, a thorough practical and theoretical text-book, suited to the wants of Elementary Schools, as well as Academies, in a single volume, and furnished at a cheap price. Very comprehensive in its plan and details, and progressive in its gradation and problems, it occupies the ground commonly given very inconveniently to two books.

The **ELEMENTS OF GEOMETRY** is simple and elegant in its arrangements, with methods of demonstration adapted to the latest and most improved modes of instruction. The particular attention given to the demonstration of the *converse* of propositions, the variety of the miscellaneous exercises, and the applications of Geometry to Mensuration, showing the practical value of the science, are among the most important peculiarities of this work.

☐ The fact that **GREENLEAF'S SERIES** is now used in most of the **STATE NORMAL SCHOOLS**, as well as in the best **SEMINARIES** in the United States, is considered the highest recommendation.

Published by ROBERT S. DAVIS & CO., Boston,
And Sold by all the Principal Booksellers.